REMARKS

In response to the Final Office Action dated February 12, 2010, claims 1, 3, 10, 11, 13-15, 18 and 20 have been amended. Claims 1-18 and 20-23 are pending in the application.

In paragraph 1 on page 2 of the Office Action, claims 1-18 and 20-23 were objected to because of informalities.

Applicant respectfully traverses the rejection, but in the interest of expediting prosecution has amended claims.

In paragraph 4 on page 3 of the Office Action, claims 1-15 and 18-23 were rejected under 35 U.S.C. § 103(b) as being unpatentable over Eyer in view of Robinett, and in further view of Hendricks.

In paragraph 5 on page 14 of the Office Action, claims 16 and 17 were rejected under 35 U.S.C. § 103(b) as being unpatentable over Eyer in view of Robinett and Hendricks, and in further view of McLaren.

Applicant respectfully traverses the rejection.

Independent claim 1 sets forth a plurality of encoding units each operative to receive a plurality of video inputs, each video input associated with a corresponding IPG page, an audio input and at least one data input, wherein each of the plurality of video inputs associated with IPG pages include a guide portion and a video portion, to encode the guide portion and the video portion of each video input associated with the IPG pages, the audio input and the at least one data input and to generate a guide stream for each of the video inputs and a video stream, an audio stream and at least one data

stream, wherein each generated guide stream, video stream, audio stream and data stream is assigned a respective packet identifier (PID), at least one transport stream generator operatively coupled to the plurality of encoding units and assigned to a distribution node, each transport stream generator operative to receive the generated guide stream, video stream, audio stream and data stream from one or more of the plurality of encoding units and to multiplex packets from the received streams into one or more transport streams, wherein the at least one transport stream generator provides packets conveying a program mapping table (PMT) for each transport stream, a session manager coupled to the at least one transport stream generator and the plurality of encoding units, the session manager being operative to manage the operation of the plurality of encoding units and the at least one transport stream generator and to service demands of the distribution node and a bandwidth manager, coupled to the at least one transport stream generator for monitoring resources usage and availability for encoding by the plurality of encoding units, the bandwidth manager, in response to a demand from the distribution node, obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node to service the demand and communicates the obtained information to the session manager for servicing the demand. Independent claims 18 and 20 include similar elements.

In contrast Eyer describes a system for transmitting and receiving IPG data via satellite and CATV paths. Data, including IPG data, is provided to a MUX/modulator encoder 100, 140. The MUX/modulator encoder 100, 140 includes an IPG translator 225, a multiplexor and N encoders 220-230.

However, Eyer discloses that IPG data bundles are broadcast over a satellite network to a user's home. Bundles allow an IRD to distinguish between two different IPG data blocks that are the same type of data (titles/schedules, for example) for the same time slot. Without the bundle numbers, the IRD can not distinguish between two data blocks of the same type and time slot, and would want to discard one as a duplicate.

Moreover, the use of bundled data blocks allows regional IPG data to be multicast addressed to the IRDs in the corresponding IPG regions while still broadcasting national (e.g., global) IPG data. Eyer discloses that all the IPG data is in one PID at rates of 20-200 kbps. Eyer further discloses that all regional IPG data is provided within one PID.

Thus, Eyer does not disclose that each generated guide stream, video stream, audio stream and data stream is assigned a respective packet identifier (PID). Rather, Eyer discloses that one PID is used for all regional IPG data.

Eyer further fails to discloses receiving receive a plurality of video inputs, wherein each video input is associated with a corresponding IPG page, an audio input and at least one data input, wherein each of the plurality of video inputs associated with IPG pages include a guide portion and a video portion. Instead, Eyer merely discloses

IPG data including global data is provided in a stream for television decoders. The IPG data provides information regarding programming services which are delivered to the decoders. Each of the decoders are assigned to an IPG region and the IPG data is broadcast via the first communication plant in data bundles. Thus, Eyer fails to suggest receiving receive a plurality of video inputs, wherein each video input is associated with a corresponding IPG page, an audio input and at least one data input, wherein each of the plurality of video inputs associated with IPG pages include a guide portion and a video portion.

Eyer further fails to disclose generating a guide stream for each of the video inputs and a video stream, an audio stream and at least one data stream. Eyer merely discloses the IPG data is broadcast in bundles and blocks of data are combined to form an IPG display. Eyer discloses that are only five types of data blocks defined, i.e., schedule_listings, descriptions, common_listings, common_descriptions, and foundation data. Thus, Eyer fails to suggest generating a guide stream for each of the video inputs and a video stream, an audio stream and at least one data stream.

Eyer also fails to suggest a session manager coupled to the at least one transport stream generator and the plurality of encoding units. The Office Action asserts that the IPG translator 220 and the Subscriber Authorization Center (SAC) 240 act as a session manager. However, the IPG translator 220 and SAC 240 are part of the MUX/modulator encoder 100, 140 (TSG). Thus, the IPG translator 220 and SAC 240 can not be said to be coupled to the MUX/modulator encoder 100, 140 (TSG).

The Office Action also states that the IPG translator 220 and SAC 240 mange the operation of the encoding units and the MUX/modulator encoder 100, 140 (TSG). However, the IPG translator 220 and SAC 240 are components of the MUX/modulator encoder 100, 140 (TSG) and thus do not manage the operations of the MUX/modulator encoder 100, 140 (TSG).

Therefore, Eyer fails to disclose, teach or suggest a session manager coupled to the at least one transport stream generator and the plurality of encoding units, the session manager being operative to manage the operation of the plurality of encoding units and the at least one transport stream generator.

Eyer also fails to suggest a bandwidth manager, coupled to the at least one transport stream generator for monitoring resources usage and availability for encoding by the plurality of encoding units. Eyer also fails to suggest a bandwidth manager that obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams or that communicates the obtained information to the session manager.

The Office Action also states that the IPG translator 220 and SAC 240 acts as the bandwidth manager. However, the IPG translator 220 and SAC 240 are part of the MUX/modulator encoder 100, 140 (TSG) and thus are not coupled to the MUX/modulator encoder 100, 140 (TSG).

In addition, the IPG translator 220 and SAC 240 do not monitoring resources usage and availability for encoding by the plurality of encoding units. Rather, IPG translator 220 merely translates source data into IPG messages for downstream

transmission to subscriber terminals. The IPG translator 220 also receives configuration data. The SAC 240 merely provides data for authorizing the decoders to receive particular programming services. The IPG translator 220 and SAC 240 do not monitoring resources usage and availability for encoding by the plurality of encoding units. Moreover, the IPG translator 220 and SAC 240 therefore does not obtain information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams or that communicates the obtained information to the session manager.

Therefore, Eyer fails to disclose, teach or suggest a bandwidth manager, coupled to the at least one transport stream generator for monitoring resources usage and availability for encoding by the plurality of encoding units. Eyer fails to disclose, teach or suggest a bandwidth manager that obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams. Eyer fails to disclose, teach or suggest a bandwidth manager that communicates the obtained information to the session manager.

Accordingly, Eyer fails to disclose, teach or suggest the invention as defined in independent claims 1, 18 and 20, as amended.

Robinett fails to overcome the deficiencies of Eyer. Robinett is relied upon for disclosing that obtaining of information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams. However, Robinett merely discloses a controller that maintains a bit rate of a transport stream by managing null and non-null packets in a transport stream.

Thus, Robinett fails to disclose, teach or suggest a transport stream generator operatively coupled to the plurality of encoding units. Robinett does not address the issue of IPG coding units or that a transport stream generator operatively coupled to the plurality of encoding units.

Robinett also fails to disclose, teach or suggest a session manager coupled to the at least one transport stream generator and the plurality of encoding units, the session manager being operative to manage the operation of the plurality of encoding units and the at least one transport stream generator. Robinett merely describes the controller acting to replace null packets with non-null packets to transmit more actual data without increasing the bit rate.

Robinett also fails to disclose, teach or suggest a bandwidth manager, coupled to the at least one transport stream generator for monitoring resources usage and availability for encoding by the plurality of encoding units. Robinett also fails to disclose, teach or suggest a bandwidth manager that obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams. Robinett further fails to disclose, teach or suggest a bandwidth manager that communicates the obtained information to the session manager. Robinett merely determines whether actual data may be inserted using non-null packets to replace null packets. Robinett does not address the issue of IPG coding units or that a transport stream generator operatively coupled to the plurality of encoding units. Thus, Robinett does not suggest

Thus, Eyer and Robinett, alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 18 and 20, as amended.

Hendricks fails to overcome the deficiencies of Eyer and Robinett. Hendricks is merely cited for disclosing monitoring resources usage and availability for encoding by the encoders. Applicant respectfully submits, however, that Hendricks discloses a cable headend 208 that performs two primary functions. First, the cable headend 208 acts as a distribution center, or signal processor, by relaying the program signal to the set top terminal 220 in each subscriber's home. In addition, the cable headend 208 acts as a network controller 214 by receiving information from each set top terminal 220 and passing such information on to an information gathering site such as the operations center 202.

Accordingly, Hendricks fails to disclose, teach or suggest a transport stream generator operatively coupled to the plurality of encoding units for monitoring resources usage and availability for encoding by the encoding units. Hendricks is focused on providing targeted advertisements and thus does not address the issue of IPG coding units or that a transport stream generator operatively coupled to the plurality of encoding units.

Hendricks further fails to disclose that each generated guide stream, video stream, audio stream and data stream is assigned a respective packet identifier (PID). Rather, Hendricks fails to even mention PIDs.

Hendricks further fails to discloses receiving receive a plurality of video inputs, wherein each video input is associated with a corresponding IPG page, an audio input and at least one data input, wherein each of the plurality of video inputs associated with IPG pages include a guide portion and a video portion. Hendricks fails to mention receiving receive a plurality of video inputs, wherein each video input is associated with a corresponding IPG page, an audio input and at least one data input, wherein each of the plurality of video inputs associated with IPG pages include a guide portion and a video portion.

Hendricks further fails to disclose generating a guide stream for each of the video inputs and a video stream, an audio stream and at least one data stream. Hendricks does not discuss generating separate streams for different content.

Hendricks also fails to disclose, teach or suggest a session manager coupled to the at least one transport stream generator and the plurality of encoding units, the session manager being operative to manage the operation of the plurality of encoding units and the at least one transport stream generator. Hendricks merely describes obtaining information from each set top terminal and passing the information to an information gather site. Hendricks also modifies program control information signal.

Hendricks also fails to disclose, teach or suggest a bandwidth manager, coupled to the at least one transport stream generator for monitoring resources usage and availability for encoding by the plurality of encoding units. Hendricks also fails to disclose, teach or suggest a bandwidth manager that obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport

streams. Hendricks further fails to disclose, teach or suggest a bandwidth manager that communicates the obtained information to the session manager.

Thus, Eyer, Robinett and Hendricks, alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 18 and 20, as amended.

McLaren fails to overcome the deficiencies of Eyer, Robinett and Hendricks. McLaren is merely cited as disclosing a slice-based encoding scheme and a picture-based encoding scheme. However, McLaren fails to disclose that each generated guide stream, video stream, audio stream and data stream is assigned a respective packet identifier (PID). Rather, McLaren fails to even mention PIDs.

McLaren further fails to discloses receiving receive a plurality of video inputs, wherein each video input is associated with a corresponding IPG page, an audio input and at least one data input, wherein each of the plurality of video inputs associated with IPG pages include a guide portion and a video portion. McLaren fails to mention receiving receive a plurality of video inputs, wherein each video input is associated with a corresponding IPG page, an audio input and at least one data input, wherein each of the plurality of video inputs associated with IPG pages include a guide portion and a video portion.

McLaren further fails to disclose generating a guide stream for each of the video inputs and a video stream, an audio stream and at least one data stream. McLaren does not discuss generating separate streams for different content.

McLaren also does not disclose a session manager operative to manage the operation of the plurality of encoding units and the at least one transport stream generator and to service demands of the distribution node. Still further, McLaren does not disclose a bandwidth manager for monitoring resources usage and availability for encoding by the plurality of encoding units.

Even further, McLaren fails to disclose a bandwidth manager that, in response to a demand from the distribution node, obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node.

Thus, Eyer, Robinett, Hendricks and McLaren, alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 18 and 20.

Dependent claims 2-17 and 21-23 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims 1 and 20, respectively. Further dependent claims 2-17 and 21-23 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 2-17 and 21-23 are patentable over the cited references.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 865-380-5976. If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 13-2725 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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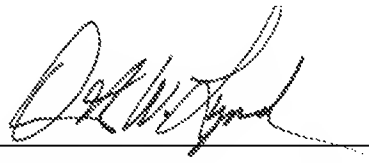
By: 

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